

Model Year 2016 DEF Quality Detection Survey for Manufacturers

1. When did you last update EPA certification representatives of status for Model Year 2016 inclusion of DEF Quality detection using either DEF quality sensor or advanced NOx sensor feedback techniques? Please attach a copy of this latest presentation in your response to these questions.
 - March 11, 2013 – 2014MY Paper on DEF Quality Detection Status
 - Included DEF quality sensor selection and implementation plans
 - July 14, 2014 – HD Cert Preview
 - DEF Quality Monitoring (Pages 22-26)
 - October 16, 2014 – LD Cert Preview
 - DEF Quality sensor (Page 4)
2. Are you pursuing the route of a DEF quality sensor or advanced NOx sensor feedback techniques?
 - a. Following the timing plan laid out in the March-2013 paper, for 16MY, Ford is including DEF Quality Sensors in our 3.2L Transit programs and 6.7L F650/F750 programs. The 6.7L Super Duty programs will get the DEF quality sensor coincident with significant program updates for 17MY and retain the NOx-based quality detection thru 16MY.
3. What is your timing to complete all testing/development requirements before your system will be ready for certification?
 - a. Testing and evaluation of the DEF quality sensor is expected to support the 16MY program Job-1 production dates.
4. Do you have any concerns for meeting the Model Year 2016 deadline for certification?
 - a. As experienced with Ford's first attempt to bring a DEF sensor to market and with all new technology there are inherent risks. Ford intends to meet production timing but has proposed strategy elements to help mitigate some of the potential risks with regards to inaccurate sensor readings.
5. What is the adjustable range of DEF quality (specified as percent urea concentration) for which your system can maintain NOx compliance?
 - a. NOx compliance will be maintained with DEF dilution down to 27% urea concentration.
6. Are you able to detect DEF dilution below your compliant adjustable range identified in Question #5 above and trigger your poor DEF quality inducement strategy?
 - a. Yes, inducement actions will be triggered when urea concentration is detected by the DEF quality sensor at/below a 27% concentration level.

7. Are you able to detect DEF dilution outside of your compliant adjustable range within 1-hour of operation with diluted DEF?
 - a. Yes, we expect detection of diluted DEF below 27% urea concentration within 1-hour of normal operation.